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## Cross-border E-commerce Development Strategy Under the "Internet + Logistics Finance" Model

(Full Paper)

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## **ABSTRACT**

In recent years, the rise of cross-border e-commerce in China has been relatively rapid, and the proportion of cross-border e-commerce in import and export trade has continued to increase. Cross-border e-commerce plays an extremely important role in promoting China's trade transformation and has become a new model of international trade. But the prosperity of any field is inseparable from the strong support of funds. This paper identifies the risk factors that may arise when cross-border e-commerce applications are applied to these models. Then analyzes and evaluates them in order to provide decision-making reference for cross-border e-commerce enterprises that have financing needs or plan to apply logistics finance.

Keywords: Cross-border e-commerce, logistics finance, model selection, analytic hierarchy process, risk assessment.

#### INTRODUCTION

In recent years, the rise of cross-border e-commerce in China has been relatively rapid, and the proportion of cross-border e-commerce in import and export trade has continued to increase. Cross-border e-commerce plays an extremely important role in promoting China's trade transformation and has become a new model of international trade. But the prosperity of any field is inseparable from the strong support of funds. In the past five years, there have been more than 600 investment and financing in China's e-commerce industry. Many large-scale cross-border e-commerce companies have received huge capital support from the capital market. In contrast, China's cross-border e-commerce SMEs have been affected. Neglect. The warehousing, transportation and payment recovery of trade goods of cross-border e-commerce enterprises are long, the capital turnover cycle is long, the occupancy is large, and there is a large financing demand. The financing dilemma of small and medium-sized cross-border e-commerce enterprises has been difficult to break through, and it has become one of the main reasons hindering the healthy and rapid development of small and medium-sized cross-border e-commerce enterprises in China. This paper combines logistics finance with cross-border e-commerce to provide a new financing path for cross-border e-commerce SMEs, helping cross-border e-commerce SMEs to get out of the dilemma of lack of funds and promote their development.

This paper identifies the risk factors that may be generated when cross-border e-commerce applies the above modes, and uses the analytic hierarchy process to apply risk factors to the cross-border e-commerce application of the above several modes: spread risk, transportation risk, access The risk of the library is analyzed and evaluated, and the size of each risk in different modes is discussed. Finally, according to the analytic hierarchy process, the inventory pledge - 2 - model has the lowest risk, the confirming warehouse mode is relatively large, and the sea and land warehouse model has the greatest risk. At the same time, the greater the risk, the greater the amount of financing that can be obtained, which requires cross-border e-commerce SMEs to weigh according to their own circumstances. The conclusions of this paper can provide decision-making reference for cross-border e-commerce enterprises that have financing needs or plan to apply logistics finance.

## MODELS of CROSS-BORDER E-COMMERCE APPLYING LOGISTICS FINANCE

#### **Inventory Pledge Business Model**

The inventory pledge business model is the most traditional business model in logistics finance, and it is the earliest and most widely used business model in history. The stock pledge first evaluates the value of the application to the commercial bank first. After the bank recognizes the value of the goods, it applies to the bank for financing, and then delivers the goods to a specialized logistics company for supervision. In operation, the pledge's profits = profit from the sale of goods - interest paid to the bank, profit of the bank = interest received - expenses incurred by management, profits of logistics enterprises = administrative expenses of bank delivery. The inventory pledge mode is divided into static pledge and dynamic pledge.

## (1) Static pledge

The enterprises that are statically pledged to be financed first hand over the ownership of the goods to the bank, and pay the deposits, which are generally about the value of the goods, to the bank, and then hand over the goods to a specialized logistics enterprise for supervision. After the goods are put into storage, the logistics enterprises provide financing. The person issues a proof of the bill, and the financier obtains the financing service with the bill. The static pledge is when the goods are supervised,

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the financier can only repay the loan in advance or partially repay the bank, and redeem the pledge in whole or in part. When the financier fails to repay the loan, the logistics company will auction the goods.

However, during the pledge period, SMEs cannot exchange goods and goods, and can only redeem the goods through repayment. Although this avoids the risk of the market, this is for enterprises with more types of products and short cycle of goods. The more inflexible form hampers the production and operation of the enterprise, so after the emergence of dynamic pledge, the static pledge is used less and less.

## (2) Dynamic pledge

The difference between dynamic pledge and static pledge is that the SMEs that allow financing can replace the pledge by means of goods exchange, but two basic conditions must be met: 1) The value of the replacement goods needs to be recognized, greater than or equal to the value of the previous pledge 2) The replacement of goods must be reviewed by a regulated logistics company. In addition, the dynamic pledge can also redeem the pledge goods by replacing the goods plus cash.

Later, based on the inventory pledge business model, under the unremitting innovation and - 3 - exploration of logistics companies, they found a more flexible way of profit, and slowly began to pay attention to how to control the risk of logistics finance, in the hope of relying on innovative services to lead logistics. Status in the financial business field. Logistics companies reflect their main advantages in the following areas: expanding service depth, increasing service scope, and innovating service methods. The logistics pledge mode is the logistics financial service of today's logistics enterprises as the leading innovation model. The traditional inventory pledge mode and the logistics pledge mode are significantly different. The traditional inventory pledge mode is usually that the bank is responsible for warehousing pledge, while the logistics pledge mode is that the logistics enterprise is responsible for import and export declaration of goods, transportation supervision, warehousing supervision, accounts receivable, etc. In addition, logistics companies expand their service scope and also increase new profit channels. Traditional supervision has become a part of logistics pledge services. The above inventory pledge mode is the traditional inventory pledge mode, and the new logistics pledge mode includes the confirming warehouse business model, the sea and land warehouse business model, the customer purchasing business model, and the customer collection model.

## **Confirmation Warehouse Business Model**

The confirming warehouse model is jointly participated by distributors, producers, banks and logistics companies. In this model, the bank stipulates that only the dealer and the manufacturer sign a sales contract, and at the same time, the logistics enterprise guarantees that the capital of the loan is safe, and then can apply for the opening of the acceptance bill. This model is a combination of bank and business reputation, which enables upstream and downstream enterprises in the supply chain to increase their own liquidity. At the same time, they do not take up capital for raw materials, goods, raw materials, etc. At the same time, they can also ensure the sale of goods and solve the problem of capital recovery. And other issues. In this business model, the four parties share the risks, improve the cash flow speed, cargo turnover efficiency, and reduce the operating costs of all parties. At the same time, banks can earn management services by earning rediscount rates and service fees. Fees, suppliers have reduced the size of the inventory, and the distributors have also eased the short-term capital turnover problem, which will enable the four parties to achieve a win-win situation.

The process is generally that the dealer relies on the goods to guarantee the logistics enterprise, and the logistics enterprise determines the insured amount based on the ratio of the actual sales volume of the goods to the inventory, and collects the supervision fee from the dealer. After the manufacturer obtains the bank acceptance bill, it delivers the goods and becomes the warehouse receipt pledge. The logistics company acts as the insurer. It should understand the basic situation of the dealers in detail and approve the underwriting ratio and the integrity of the goods according to the recommendations of the value of the pledge of financial institutions.

The confirming warehouse business model can effectively alleviate the pressure of supply chain dealers' short-term capital turnover, and the way in which their suppliers first ship and then charge, is also conducive to the sellers in the supply chain to occupy the market in advance, avoiding the delay of suppliers. The goods are either not shipped or unwilling to produce. In this - 4 - model, logistics companies play a role in the supervision of goods. At the same time, logistics companies need to choose dynamic pledge or static pledge mode according to the requirements of banks. It should be noted that banks and suppliers must rely on third-party logistics companies to strictly regulate the goods to control trading risks. There are two major support for the development of this business: dealers with strong terminal sales strength and more reputable manufacturers in the supply chain.

## Sea and Warehouse Business Model

The sea and land warehouse model is a logistics finance business model that has only emerged in recent years in global international trade. It refers to the pledge of submitting some or all of its goods to financial institutions (banks, etc.) by financing individuals or enterprises. The supervisor of the goods (logistics enterprise) integrates the warehousing of goods and the transportation of sea, and the financial institutions (banks, etc.) then provide certain loans to the financing individuals or enterprises

according to the relevant agreements with the value of the pledge goods. If the logistics enterprise fails to repay the loan according to the situation of the goods, if the pledgor cannot return the loan on time, the logistics enterprise will seal the goods and keep the bank and the final disposal of the goods being pledged. In the sea and land warehouse model, banks must rely on logistics companies to control operational risks and effectively perform their duties of strict warehousing, supervision, prudent lending, and transportation.

The sea and land warehouse model is based on the combination of the advantages of customs clearance, warehousing and transportation and the characteristics of the bank's trade finance products. In this model, the logistics company can provide its original service target and scope to the supply chain. Extending the two ends and developing a business model for product supervision, warehousing and transportation, it is gradually able to provide financing companies with comprehensive service and comprehensive solutions, which in turn can greatly improve the profitability of logistics enterprises and strengthen their core competitiveness. It is valuable experience for logistics enterprises to finally develop logistics finance to create logistics banks. At the same time, it also promotes the rational distribution of their resources by upstream and downstream enterprises in the supply chain, alleviating the short-term financial pressure and realizing the optimal allocation of resources.

The main difference between the sea and land warehouse and the confirming warehouse model is that the sea and land warehouse model is the dynamic management of the operation of the pledge. The risk management is more difficult and requires more active management of the risk, because there are many in the way of cargo transportation. The factors are certain, so this model is more stringent on the requirements of the supervisors on the way. The leading role of the logistics chain in the Hailu warehouse model is more prominent, and the core competitiveness of logistics companies such as customs declaration, warehousing, transportation, inspection and customs clearance is also more obvious. In addition, in this model, logistics enterprises If the information flow can be accurately and timely, then the risk can be controlled more actively and effectively.

# RISK FACTOR ASSESSMENT of CROSS-BORDER E-COMMERCE APPLYING LOGISTICS FINANCE Risk Identification and Classification of Cross-border E-commerce in Logistics Finance Mode

External risks

External risks refer to risks caused by factors other than cross-border e-commerce companies, banks, and logistics companies, such as those caused by legal, environmental, economic, political, and cultural factors. External risks are unpredictable, and the scope is wide, and the impact is far-reaching. It is difficult for micro-enterprises to control and evade, so this article will not study.

## Internal risk

Internal risk refers to risks caused by relevant factors of cross-border e-commerce companies, banks, and logistics companies, such as default, bankruptcy, or illegality of the three. Internal risks are controllable, preventable and regulated. Internal risks are mainly divided into three parties: legal risks, credit risks, and regulatory risks.

- (1) Legal risk: The main discussion is the risk of property rights and legality of pledge, which has nothing to do with the study of model selection. Therefore, this paper does not discuss this risk for the time being.
- (2) Credit risk: This risk is mainly related to the risk of the bank, and has nothing to do with the mode selection of cross-border e-commerce, so this paper will not discuss this risk.
- (3) Regulatory risk: Based on the previous research results and practical experience, this paper summarizes the regulatory risks into the following categories: transportation risk, inventory risk, loss risk, inventory risk, cargo risk, moral hazard, information risk, risk of entering and leaving the warehouse. The risk of loss refers to the occurrence of fires and other incidents due to staff mistakes, resulting in the risk of loss of goods. The risk difference is not large under different modes, so this article will not discuss. Transportation risk refers to the risk of loss of goods in the transportation of goods; inventory risk refers to the risk of policing stocks under the dynamic pledge mode is lower than the warning amount, and the logistics enterprises have not noticed the risk of supervision and loss; It is the risk that the goods will be checked for errors in the goods on a regular basis; the risk of goods difference refers to the risk, the quantity and the type of goods appearing when the quantity of goods is calculated, and the risk is incorrect; moral hazard refers to the professional ethics of the relevant employees. The risk of loss of goods caused by the lack of negligence and self-stealing; the information risk refers to the risk that the pledge enterprise, the bank, and the logistics enterprise fail to communicate accurately and timely; the risk of entering and leaving the warehouse refers to the process of entering or removing the warehouse. Risk of loss of goods due to errors in related personnel.

#### **Construction and Analysis of Structural Models**

According to the risk identification, establish a risk assessment and model selection analytic hierarchy model for cross-border e-commerce application logistics finance, as shown in Figure 1 below:

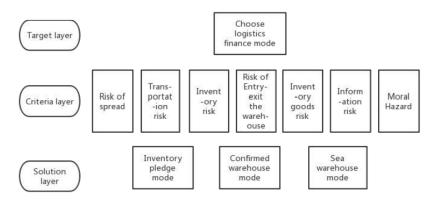


Figure 1: Cross-border e-commerce applying logistics financial risk assessment and model selection model

#### Level 1 indicator weight and consistency test

First of all, in order to scientifically and reasonably judge the weight of cross-border e-commerce application logistics finance related risks, the author invited three experts and scholars of cross-border e-commerce and three professionals engaged in related industries to use the nine-digit scale to put the above seven kinds. The risk is compared in pairs. After testing, it was found that two of the six questionnaires did not meet the requirements of the consistency test, and the two questionnaires were deleted. The remaining four documents were geometrically averaged and combined with expert opinions to arrive at a new matrix.

The first-level indicator judgment matrix label and its meaning are shown in Table 1 below:

Bi risk factor Relati and Bj risk Very High Extremely vely Very Larger Equal Less low factor low large risky risk risk risk risk risk low risk evaluation risk Risk value Risk Bi risk factor evaluation 9 7 5 3 1/3 1/5 1/7 1/9 1 value Remarks Take 8,6,4,2,1/2,1/4,1/6,1/8 as the median value of the above evaluation value

Table 1: First-level indicator judgment matrix labeling and its meaning

The primary indicator discriminant matrix is shown in Table 2 below:

Table 2: First-level indicator discriminant matrix

				Risk of			
	Risk of	Transporta	Inventory	entering and leaving the	Inventory	Informati	Moral
Risk factors	spread	tion risk	risk	warehouse	goods risk	on risk	Hazard
Risk of spread	1.000	0.395	6.993	2.532	2.976	2.532	5.025
Transportation risk	2.532	1.000	5.988	1.767	3.021	5.012	4.033
Inventory risk	0.143	0.167	1.000	0.221	0.286	0.532	0.532
Risk of entering and							
leaving the							
warehouse	0.412	0.556	4.532	1.000	2.012	4.033	3.012
Inventory goods risk	0.336	0.331	3.500	0.556	1.000	3.012	2.013
Information risk	0.395	0.223	2.012	0.247	0.332	1.000	2.012
Moral Hazard	0.199	0.247	2.012	0.332	0.556	0.532	1.000

Normalize each column of elements and the resulting normalized matrix is shown in Table 3 below:

Table 3: Normalized Matrix

				Risk of			
				entering and			
	Risk of	Transporta	Inventory	leaving the	Inventory	Informati-	Moral
Risk factors	spread	tion risk	risk	warehouse	goods risk	on risk	Hazard
Risk of spread	0.201	0.140	0.269	0.367	0.296	0.152	0.286
Transportation risk	0.502	0.351	0.231	0.294	0.296	0.303	0.229
Inventory risk	0.029	0.058	0.038	0.033	0.028	0.030	0.029
Risk of entering and							
leaving the							
warehouse	0.080	0.175	0.173	0.147	0.198	0.242	0.171
Inventory goods risk	0.067	0.117	0.135	0.073	0.099	0.182	0.114
Information risk	0.080	0.070	0.077	0.037	0.033	0.061	0.114
Moral Hazard	0.040	0.088	0.077	0.049	0.049	0.030	0.057

The weight vector is:  $(0.245, 0.315, 0.035, 0.170, 0.112, 0.067, 0.056)^T$ 

It can be seen that in the first-level indicator item, the difference risk accounted for 24.5%, the transportation risk accounted for 31.5%, the inventory risk accounted for 3.5%, the outbound storage risk accounted for 17%, the inventory risk accounted for 11.2%, and the information risk accounted for 6.7%. Moral hazard accounts for 5.6%.

Consistency test:

Above matrix  $\lambda_{\text{max}} = 7.330$ ,

$$CI = \frac{\lambda_{\text{max}} - n}{n - 1} = 0.055,\tag{1}$$

$$CR = \frac{CI}{RI} = 0.042,\tag{2}$$

Therefore, there is satisfactory consistency.

Through the comprehensive scores of the above-mentioned experts and scholars and the professionals who have worked, it can be seen that experts and professionals generally believe that the risks arising from the application of logistics finance to cross-border e-commerce are mainly transportation risks, and the frequent transportation of goods will cause the loss of goods, followed by It is the risk of goods difference, and then it is the risk of entering and leaving the warehouse, the risk of inventory, information risk, moral hazard, inventory risk.

Cross-border e-commerce application risk assessment under different logistics financial models

The corresponding pattern of each row is compared with the different modes of each column, which will result in a very high risk of 5 points in the table, 3 points with a relatively high risk, 1 point with the same risk, and a small risk 1/3 points, the risk is very small, 1/5 points, and take 4, 2, 1/2, 1/4 is the middle value of the above evaluation value. The scores given by experts and professional practitioners are combined in the same way as above, and the scores are as shown in Table 4-10 below:

Table 4: Score of risk of spread in different modes

Diels of appead	Inventory pledge	Confirmed	Sea warehouse
Risk of spread	mode	warehouse mode	mode
Inventory pledge			
mode	1.000	0.286	0.221
Confirmed			
warehouse mode	3.500	1.000	0.334
Sea warehouse			
mode	4.517	2.99	1.000

Table 5: Transportation risk score in different modes

Transportation	Inventory pledge	Confirmed	Sea warehouse
risk	mode	warehouse mode	mode
Inventory pledge			
mode	1.000	0.395	0.235
Confirmed			
warehouse mode	2.532	1.000	0.288
Sea warehouse			
mode	4.251	3.472	1.000

Table 6: Inventory risk score in different modes

Inventory risk	Inventory pledge mode	Confirmed warehouse mode	Sea warehouse mode
Inventory pledge			
mode	1.000	4.716	0.882
Confirmed			
warehouse mode	0.212	1.000	0.222
Sea warehouse			
mode	1.133	4.512	1.000

Table 7: Score of risk of entering and leaving the warehouse in different modes

Risk of entering and leaving the warehouse	Inventory pledge mode	Confirmed warehouse mode	Sea warehouse mode
Inventory pledge			
mode	1.000	2.490	0.332
Confirmed			
warehouse mode	0.402	1.000	0.212
Sea warehouse			
mode	3.14	4.751	1.000

Table 8: Score of inventory goods risk in different modes

Inventory goods	Inventory pledge	Confirmed	Sea warehouse
risk	mode	warehouse mode	mode
Inventory pledge			
mode	1.000	0.497	0.321
Confirmed			
warehouse mode	2.012	1.000	0.212
Sea warehouse			
mode	3.112	4.751	1.000

Table 9: Score of information risk in different modes

Information risk	Inventory pledge	Confirmed	Sea warehouse
IIIOIIIatioii iisk	mode	warehouse mode	mode
Inventory pledge			
mode	1.000	0.398	0.210
Confirmed			
warehouse mode	2.512	1.000	0.332
Sea warehouse			
mode	4.751	3.012	1.000

Table 10: Score of moral hazard in different modes

Moral Hazard	Inventory pledge	Confirmed	Sea warehouse
Moral Hazard	mode	warehouse mode	mode
Inventory pledge			
mode	1.000	0.398	0.249
Confirmed			
warehouse mode	2.512	1.000	0.497
Sea warehouse			
mode	4.013	2.014	1.000

## (1) Table 4 Matrix Risk Assessment:

Normalize each column of elements and the resulting normalized matrix is shown in Table 11 below:

Table 11: the resulting normalized matrix of table 4

Risk of spread	Inventory pledge	Confirmed	Sea warehouse
Risk of spread	mode	warehouse mode	mode
Inventory pledge			
mode	0.111	0.067	0.143
Confirmed			
warehouse mode	0.389	0.233	0.214
Sea warehouse			
mode	0.500	0.700	0.643

The weight vector is: (0.107, 0.279, 0.614) T

It can be seen that experts and practitioners believe that the risk of cargo difference between Hailu warehouse is relatively the largest, followed by the risk of goods difference in the confirmation warehouse model, and the risk of inventory lag in the inventory pledge mode is the smallest.

## Consistency test:

The above matrix  $\lambda_{\text{max}} = 3.081$ , CI = (3.081-3) / (3-1) = 0.040, CR = CI / RI = 0.0195 / 0.58 = 0.070  $\leq$  0.1, so there is satisfactory consistency.

## (2) Table 5 Matrix Risk Assessment:

Normalize each column of elements and the resulting normalized matrix is shown in Table 12 below:

Table 12: the resulting normalized matrix of table 5

Transportation	Inventory	Confirmed	Sea
risk	pledge mode	warehouse	warehouse
TISK	pleage mode	mode	mode
Inventory pledge			
mode	0.129	0.091	0.150
Confirmed			
warehouse mode	0.323	0.227	0.213
Sea warehouse			
mode	0.548	0.682	0.638

Note: After this, the author no longer repeats the consistency test and makes a statement. If the consistency test is not passed, it proves that there is a deviation in the evaluation score and needs to be re-rated.

The weight vector is: (0.123, 0.254, 0.623) T

It can be seen from this that experts and practitioners believe that the risk of transportation in the sea and warehouse mode is relatively large, the risk of the mode of the confirmation warehouse is relatively small, and the risk of transportation in the inventory pledge mode is relatively small.

## (3) Table 6 Matrix Risk Assessment:

Normalize each column of elements and the resulting normalized matrix is shown in Table 13 below:

Table 13: the resulting normalized matrix of table 6

Inventory risk	Inventory pledge mode	Confirmed warehouse mode	Sea warehouse mode
Inventory pledge mode	0.455	0.476	0.450
Confirmed warehouse mode	0.091	0.095	0.100
Sea warehouse mode	0.455	0.429	0.450

The weight vector is: (0.460, 0.095, 0.444) T

It can be seen from this that experts and practitioners believe that inventory pledge mode and sea-land warehouse model have large inventory risks, and the inventory risk of the confirmation warehouse model is relatively small.

## (4) Table 7 Matrix Risk Assessment:

Normalize each column of elements and the resulting normalized matrix is shown in Table 14 below:

Table 14: the resulting normalized matrix of table 7

Risk of entering and leaving the warehouse	Inventory pledge mode	Confirmed warehouse mode	Sea warehouse mode
Inventory pledge			
mode	0.227	0.303	0.216
Confirmed			
warehouse mode	0.091	0.121	0.137
Sea warehouse			
mode	0.682	0.576	0.648

The weight vector is: (0.249, 0.116, 0.635) T

It can be seen that experts and practitioners believe that the risk of entering and leaving the warehouse is relatively the largest, followed by inventory pledge mode and confirming warehouse mode.

## (5) Table 8 Matrix Risk Assessment:

Normalize each column of elements and the resulting normalized matrix is shown in Table 15 below:

Table 15: the resulting normalized matrix of table 8

Inventory goods risk	Inventory pledge mode	Confirmed warehouse mode	Sea warehouse mode
Inventory pledge mode	0.167	0.080	0.216
Confirmed warehouse mode	0.333	0.160	0.137
Sea warehouse mode	0.500	0.760	0.648

The weight vector is: (0.154, 0.210, 0.636) T

It can be seen from this that experts and practitioners believe that the risk of inventory of the sea and land warehouse model is relatively large, the risk of the inventory of the bonded warehouse model is relatively small, and the risk of inventory pledge mode is relatively small.

## (6) Table 9 Matrix Risk Assessment:

Normalize each column of elements and the resulting normalized matrix is shown in Table 16 below:

Table 16: the resulting normalized matrix of table 9

Information risk	Inventory pledge mode	Confirmed warehouse mode	Sea warehouse mode
Inventory pledge mode	0.121	0.091	0.136
Confirmed warehouse mode	0.303	0.227	0.216
Sea warehouse mode	0.576	0.682	0.648

The weight vector is: (0.116, 0.249, 0.635) T

It can be seen that experts and practitioners believe that the information risk of Hailu warehouse model is relatively the largest, followed by the confirmation warehouse mode and inventory pledge mode.

## (7) Table 10 Matrix Risk Assessment:

Normalize each column of elements and the resulting normalized matrix is shown in Table 17 below:

Table 17: the resulting normalized matrix of table 10

Moral Hazard	Inventory pledge mode	Confirmed warehouse mode	Sea warehouse mode
Inventory pledge mode	0.133	0.118	0.143
Confirmed warehouse mode	0.333	0.294	0.286
Sea warehouse mode	0.533	0.588	0.571

The weight vector is: (0.131, 0.304, 0.564) T

It can be seen from this that experts and practitioners believe that the moral hazard of the Hailu warehouse model is relatively the largest, followed by the confirming warehouse model and the inventory pledge model.

#### Level total ordering

The weight vector of the comparison matrix constructed by the criterion layer: U=(0.245, 0.315, 0.035, 0.170, 0.112, 0.067, 0.056)T;

Each weight vector of the decision layer: W=(w1,w2,w3,w4,w5,w6,w7)T (w1, w2, ....w7 are the weights of each risk in different modes);

Calculate the total weight by U\*W and get: (0.156, 0.229, 0.616)T;

Let U=(a1, a2, a3, a4, a5, a6, a7)T; CI1, CI2, ... CI7 be the CI of each risk in different modes; RI1, RI2,.....RI7 be the RI of each risk in different modes.

$$CR = \frac{a_1 C I_1 + a_2 C I_2 + ... + a_7 C I_7}{a_1 R I_1 + a_2 R I_2 + ... + a_7 R I_7}$$
(3)

Total order consistency test:

 $CR = (0.040*0.245+0.018*0.315+0*0.035+0.012*0.170+0.076*0.112+0.011*0.067+0.003*0.056)/0.58 = 0.064 \leq 0.1. \text{ Therefore, there is satisfactory consistency.}$ 

From the weight of the total ranking of the hierarchy, it can be known that the risk of the inventory pledge model is the lowest in terms of the seven risks, the risk of the confirmation warehouse model is relatively large, and the risk of the sea and land warehouse model is relatively the largest.

#### **Analysis Conclusion**

Based on the analysis of the above AHP, it can be seen that the inventory pledge mode is more windy than the other two logistics financial models.

The risk is lower, the risk of the confirming warehouse model is higher than that of the inventory pledge model, and the risk of the sea and land warehouse model is relatively Speaking the highest.

Among them, the confirmation warehouse mode requires less inventory and the inventory risk is lower, but it is from the dealer, logistics enterprise, gold. If the cooperation between the institutions and the suppliers is in cooperation, more information communication is needed, which is greater than the inventory pledge model.

Informational risk and moral hazard.

The sea and land warehouse model involves a wide range of transportation, and the process in transportation is also complicated, and there are many documents required. The economic and political environment facing the country is also more complicated, so it is full of greater risk of goods, information, and morality. Insurance and so on. However, although the sea and land warehouse model faces greater risks, it can provide more services and earn more profits.

#### **CONCLUSION**

In recent years, China's cross-border e-commerce industry has developed rapidly, and its position in China's import and export trade is getting higher and higher, which plays an extremely important role in promoting China's trade transformation. However, the development of any industry requires the support of funds, especially in the field of cross-border e-commerce. The warehousing and transportation funds are large, and the payment period is long, which requires financing support. Many large-scale cross-border e-commerce enterprises in China have received huge financial support, but China's cross-border e-commerce SMEs have long been neglected, limited financing channels, poor environment, high risks and difficulties, and a scientific and rational financing is urgently needed. Ways to help it grow quickly and healthily. This paper combines cross-border e-commerce and logistics finance to provide a reliable financing path for cross-border e-commerce SMEs to promote their sound and rapid development.

The second chapter of this paper discusses three types of logistics finance models that have been successfully applied: inventory pledge mode, confirmation warehouse mode, sea and land warehouse mode, and introduces the operation process, profit model and advantages and disadvantages of these three modes. The third chapter identifies and evaluates the risks associated with cross-border e-commerce application of logistics finance, and invites 3 experts and scholars and 3 professionals engaged in related industries to score through the analytic hierarchy process. Through comprehensive evaluation of seven risks such as cargo risk, transportation risk, moral hazard, information risk and inventory risk, it is concluded that the risk of the sea and land warehouse model is relatively large, followed by the mode of the confirmed warehouse and the risk of the inventory pledge model. The lowest, but the greater the risk, the greater the corresponding benefit.

When cross-border e-commerce SMEs choose the logistics financial model and formulate the development strategy under the logistics financial model, they can analyze the types and types of risks under each model analyzed according to the third-level analytical analysis method, and evade the situation according to the company's own situation. Risk, plan optimal financing solutions, and solve corporate financing problems.

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